THE FIRELESS COOKER

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It is a long distance from the patented fireless cooker of the shops, with all the latest devices, to one constructed in a washstand drawer out of some excelsior that came packed about the dishes and some pieces of denim that happened to be in the house. But these two cookers and all their many cousins, home-made or factory-made, depend upon the same principle for their effectiveness. The material to be cooked is heated thoroughly in the ordinary way over the fire, then covered closely and put into a tight box packed with some non-conducting material through which the heat passes very slowly. While the heat is thus retained, it does the cooking.

Fireless cookers on the market are of two sorts. The first kind consists of a box containing one, two, or more compartments for kettles. The kettles fit closely in the compartments and have tight-fitting covers. The space between the compartments and the outside box is filled, usually, with mineral wool, an excellent non-conductor of heat. In the latest and best cookers, the compartments are lined and the packing is covered in completely and permanently with metal, making the whole box clean and sanitary. The second kind differs from the first only in having radiators of soapstone or other material to fit underneath and over the top of each kettle. These radiators are heated in the oven or on top of the stove while the food is heating, and are put into the cooker hot when the food is put in.

In the first kind of cooker it is possible to cook only such food as would ordinarily be boiled, stewed, or steamed. In the second kind, with the heat from the radiators, it is possible to brown the food as we do in the processes of baking and roasting.

Home-made cookers resemble the first rather than the second kind of shop-made cookers. They will do excellent work if well-constructed and properly managed, they are inexpensive, and they can be made by any woman who can handle a needle and drive a nail, or get the ever-useful man to perform the latter service.

The first essential is a wooden box, which very likely can be bought from the grocer for a small sum, if the attic or cellar doesn't furnish one; 18 x 18 x 18 inches is a good size, 18 x 18 x 12 will do. The box must not be too small, or there will not be space enough for the kettle

and a sufficient amount of non-conducting material. The seams of the box must be tight, and it must have a close-fitting cover, which can be hinged at the back and fastened at the front with a screw hook and eye or other device to keep it tightly closed.

Paint or stain the box for the sake of appearance. This is better than to cover it with cloth of any kind which soon gets soiled and must be renewed. Line the box with several thicknesses of newspaper, which is a non-conductor. Make bags of unbleached muslin, one for the bottom, one for the top, and one long one to go around all four sides, or, if it is more convenient, one bag for each of the four sides. If you want two compartments, make a bag for the division. Fill the bags with excelsior or hay, whichever is easiest to get. If nice, clean hay is obtainable, it is excellent, and fits in about the kettles more closely than the excelsior. Some plumbers keep the mineral wool, and it can be purchased from them. It is rather irritating to the hands and makes cushions that are much heavier to handle, but it retains the heat better than the other substances. However, hay or excelsior make a sufficiently good box.

The next essential is a kettle or pail with a close-fitting cover. It is usually easier to find a pail that answers this description than a kettle. A two-quart granite pail will do nicely.

Suppose we want rolled oats for breakfast. We will let the cereal boil from five to ten minutes in the cooker pail over the fire, put on the cover, set the pail in our nest of cushions, fill in any spaces there may be between cushions and pail with crumpled newspapers, put on the top cushion, lay two or three folded newspapers over the cushion, close and fasten the box. This should be done quickly, so that no heat may be lost from the food. Then we can go to bed, and in the morning we shall have some thoroughly cooked oats ready for us. Whether the cereal will be hot enough to serve depends upon the thoroughness of the insulation. It may need re-heating.

Some things cook better if surrounded by hot water in the cooker. So it is a good idea to have two covered pails, one of which will fit inside the other, leaving room for boiling water in the outer pail.

The advantages of the fireless cooker are these: First, economy of fuel, time, and energy. Where the fuel used is gas, a considerable saving may be effected by a careful study of the fireless cooker and its possibilities. Foods which require long cooking can usually be prepared to advantage in the cooker. All breakfast cereals, macaroni, rice, dried beans and peas, dried fruits, steamed puddings and meat stews are among the dishes which can be prepared with a saving of fuel. Where a coal

range is used, the advantage of the cooker is felt chiefly in the summer, when, with the help of the cooker, the range fire may be allowed to go out early in the day.

The cooker saves time and energy because, after the food has been put into the box, it doesn't need watching. It can't burn, and there is not much danger of over-cooking. With most foods that one would cook in the hay box, a little extra time will not matter in the least.

The second advantage of the fireless is that many foods are more perfectly cooked at the low temperature maintained in the box than at the high temperature of ordinary cooking. Fine flavors which pass off in the steam by the usual process are retained. Undesirable flavors and odors developed by long boiling are avoided. The toughening of the proteid constituents of the food by high temperature is also avoided, while the long, slow cooking is thoroughly effective in softening and loosening the connective tissue and cellulose.

Any ingenious person will find something available for constructing a fireless cooker. A fibre water pail, with a wooden cover clamped on, makes a neat and convenient one-compartment cooker, which takes up very little room and can be moved about easily. A butter firkin is also good. The washstand mentioned in the first paragraph happens to be doing duty as a kitchen-cabinet in a light-housekeeping scheme, and one of its deep drawers is utilized for a cooker. One of the most satisfactory home-made cookers was built by lining the ice-compartment of an unused refrigerator with bags of fresh, sweet hay. This, in connection with a blue-flame oil stove, made the cooking easy at a little summer cottage. The memory still lingers of beets deliciously tender after four hours in the top of the ice-box, and of otherwise inedible pears reduced to a satisfying consistency by an over-night sojourn among the hay-bags.

One last possibility for the fireless cooker must be mentioned. That is a small trunk. That has only to be properly packed, and it is all ready to serve you as a cook stove.

Here are a few suggestions which will serve to start one in the ways of fireless cooking. They are given in small quantities for the benefit of those who are doing light housekeeping for two.

Macaroni. Two cups boiling water, ½ teaspoon salt, ¼ cup macaroni, broken in half-inch pieces. Bring water to boiling point, drop in macaroni, season, and boil twenty minutes, lifting with a fork occasionally to prevent sticking. Leave in the cooker five hours, through the day or overnight, as convenient. Drain and serve with tomato sauce or grated cheese.

Prunes. One cup of prunes, 1½ cups water, 2 tablespoons sugar. Wash prunes thoroughly, put over in cold water, add sugar, and bring slowly to boiling point. Put in cooker and leave over night.

Rice. One-third cup rice, 1½ cups water, 1 tea-spoon salt. Look over and wash rice. Bring water to boiling point, add salt, drop in rice. Lift to prevent sticking. Boil ten minutes, leave in cooker three hours or longer.

Apricots. One cup apricots, 1 cup cold water, ¼ cup sugar. Wash apricots, put over in cold water with sugar, bring to boiling point. Leave in cooker over night.

Steamed pudding. Three-quarter tablespoon butter, 2 tablespoons molasses, 2 tablespoons milk, ½ cup flour (scant), ⅛ teaspoon each of soda, salt, cloves, nutmeg, 12 dates cut in pieces. Mix all the dry ingredients, add milk, molasses, and butter melted. Use two pails. Grease the smaller pail thoroughly and turn into it the pudding mixture. Cover and set in the larger pail which should contain boiling water. Boil one-half hour. Put in the cooker and leave through the day or over night.

Vegetable Stew. One potato, one carrot, one turnip, one small onion. After paring, cut the potato, carrot, and turnip into half-inch dice, and slice the onion. Put into pail, cover with water and bring to boiling point. Put into cooker and leave four hours. Thicken with browned flour, season with salt and butter, and serve.

For a meat stew, get a pound of shoulder of lamb cut up in small pieces. After wiping with a damp cloth, cover with boiling water, add half an onion, and let simmer forty-five minutes. Add salt and diced vegetables, carrots, turnips, and potatoes, cook five minutes more. Put in the cooker for the day, or night.

Any breakfast cereal may be prepared as usual, cooked five or ten minutes, and left in the cooker over night.

The time for leaving the various foods in the cooker has been, with the writer, largely a matter of convenience, depending upon business engagements. Things have been left in from morning until noon, from noon until night, from night until morning, as suited the circumstances. So the time given for that part of the process cannot be taken as a hard and fast rule. Further experiment might show that more or less time would be as well or better. But the results so far have seemed to show that the cooker adopts itself very kindly to business hours.